



Figure 22. Conceptual model shows the potential evolution of the North Carolina coastal system in response to a 2 foot sea-level rise and increased tropical storm intensity, both of which are possible by 2100. The future mainland shoreline and wetland environments (marsh, pocosin swamp forest) are superimposed upon the modern shoreline and elevation configuration. Greater shoreline recession, ecosystem migration and marsh development in northern Pamlico Sound is likely to occur where the tidal range will be enhanced. Segmentation of the barrier islands in numerous vulnerable locations may occur in response to a 2 foot/century rate of rise and increased hurricane activity causing enhanced tidal interchange.